Australian Bureau of Statistics

6202.0 - Labour Force, Australia, Dec 2009

Previous ISSUE Released at 11:30 AM (CANBERRA TIME) 14/01/2010

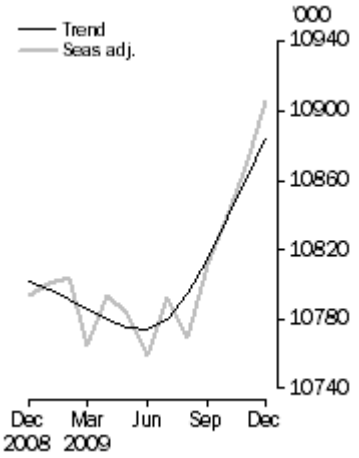
Summary

Main Features

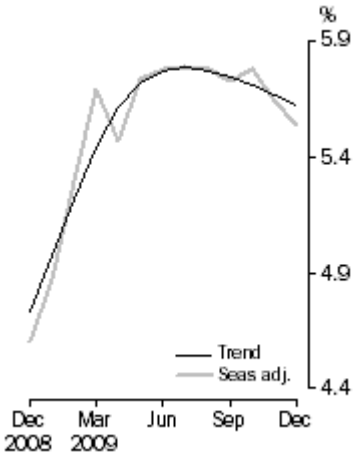
DECEMBER KEY FIGURES

	Nov 2009	Dec 2009	Nov 09 to Dec 09	Dec 08 to Dec 09
Trend				
Employed persons ('000)	10 862.0	10 884.3	22.3	0.8%
Unemployed persons ('000)	652.0	648.2	-3.8	20.9%
Unemployment rate (%)	5.7	5.6	0.0pts	0.9pts
Participation rate (%)	65.2	65.2	0.0pts	-0.1pts
Seasonally Adjusted				
Employed persons ('000)	10 870.7	10 905.9	35.2	1.0%
Unemployed persons ('000)	650.0	639.4	-10.6	22.7%
Unemployment rate (%)	5.6	5.5	-0.1pts	0.9pts
Participation rate (%)	65.2	65.2	0.0pts	0.0pts

Employed Persons



Unemployment rate



DECEMBER KEY POINTS

TREND ESTIMATES (MONTHLY CHANGE)

- Employment increased to 10,884,300
- Unemployment decreased to 648,200

- Unemployment rate decreased to 5.6%
- Participation rate remained at 65.2%
- Aggregate monthly hours worked increased to 1,533.9 million hours

SEASONALLY ADJUSTED ESTIMATES (MONTHLY CHANGE)

- Employment increased 35,200 (0.3%) to 10,905,900. Full-time employment increased 7,300 to 7,635,100 and part-time employment increased 27,900 to 3,270,800.
- Unemployment decreased 10,600 (-1.6%) to 639,400. The number of persons looking for full-time work decreased 15,700 to 467,200 and the number of persons looking for part-time work increased 5,100 to 172,100.
- Unemployment rate decreased 0.1 pt to 5.5%. The male unemployment rate decreased 0.2 pts to 5.6% and the female unemployment rate remained at 5.5%.
- Participation rate remained at 65.2%.
- Aggregate monthly hours worked decreased 1.0 million hours (-0.1%) to 1,535.6 million hours.

NOTES

FORTHCOMING ISSUES

ISSUE	Release Date
January 2010	11 February 2010
February 2010	11 March 2010
March 2010	8 April 2010
April 2010	13 May 2010
May 2010	10 June 2010
June 2010	8 July 2010

CHANGES THIS MONTH

The re-instatement of the Labour Force Survey (LFS) sample is complete. The sample was introduced over a four month period, commencing in September 2009. Detailed information about the sample reinstatement is available in **Information Paper: Labour force Survey Sample Design, Nov 2007 (Third edition)** (cat. no. 6269.0).

SAMPLING ERROR

The estimates in this publication are based on a sample survey. Therefore, published estimates and the movements derived from them are subject to sampling variability. Standard errors give a measure of this variability, see pages 33 and 34. The interval bounded by two standard errors is the 95% confidence interval, which provides a way of looking at the variability inherent in estimates. This represents a 95% chance that the true value of the estimate lies within that interval.

Movements in seasonally adjusted series between November 2009 and December 2009

	Monthly change	95% Confidence interval		
Total Employment	35 200	-17 800	to	88 200
Total Unemployment	-10 600	-41 600	to	20 400
Unemployment rate	-0.1 pts	-0.3 pts	to	0.1 pts
Participation rate	0.0 pts	-0.4 pts	to	0.4 pts

INQUIRIES

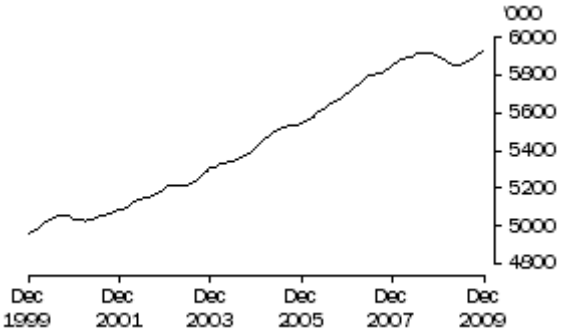
For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070, email client.services@abs.gov.au or Steve Wood on Canberra (02) 6252 6525, email labourforce@abs.gov.au.

Employed Persons,Trend estimates

EMPLOYED PERSONS TREND ESTIMATES

MALES

The trend estimates of employed males generally rose from 4,965,600 in December 1999 to 5,914,700 in September 2008. The trend then fell to 5,850,500 in May 2009 before rising to 5,930,400 in December 2009.



FEMALES

The trend estimates of employed females generally rose from 3,891,500 in December 1999 to 4,927,000 in April 2009 before falling to 4,920,400 in July 2009. The trend has since risen to 4,953,900 in December 2009.

PERSONS

The trend estimates of employed persons generally rose from 8,857,200 in December 1999 to 10,807,000 in October 2008. The trend then fell to 10,774,200 in June 2009 before rising to 10,884,300 in December 2009.

Aggregate Monthly Hours Worked,Trend Estimates

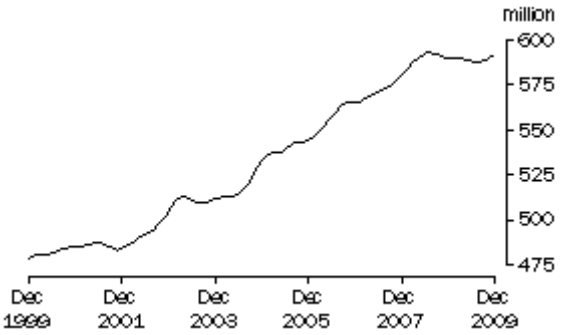
AGGREGATE MONTHLY HOURS WORKED TREND ESTIMATES

MALES

The trend estimate of aggregate hours worked by males generally fell from 850 million in December 1999 to 828 million in April 2001 before rising to 959 million in July 2008. From its peak in July 2008, the trend then fell to 928 million in June 2009 before increasing to 943 million in December 2009.

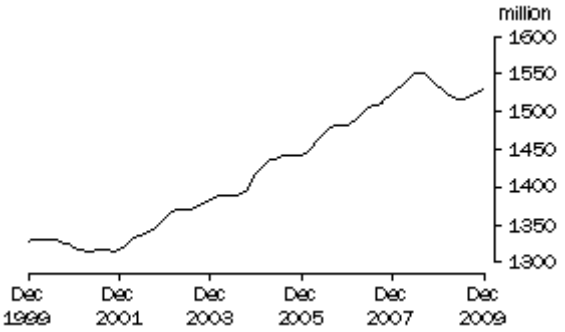
FEMALES

The trend estimate of aggregate hours worked by females generally rose from 479 million in December 1999 to 592 million in July 2008. The trend then fell to 587 million in July 2009 before rising slightly to 591 million in December 2009.



PERSONS

The trend estimate of aggregate hours worked generally fell from 1,329 million in December 1999 to 1,315 million in April 2001. The trend then rose to 1,552 million in July 2008. From its peak in July 2008, the trend then fell to 1,515 million in June 2009 before increasing to 1,534 million in December 2009.



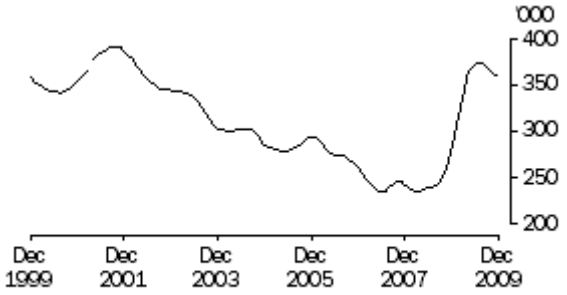
Unemployed Persons,Trend estimates

20/01/2010 Note: Minor correction to scale in graph for Unemployed Males Trend Estimates, no other data was affected.

UNEMPLOYED PERSONS TREND ESTIMATES

MALES

The trend estimates of unemployed males fell from 358,300 in December 1999 to 342,000 in August 2000. The trend then rose sharply to 392,000 in September 2001, before falling to 234,700 in March 2008. The trend then rose to 375,100 in July 2009 before falling to 358,700 in December 2009.



Series break at April 2001; see paragraphs 17 of Explanatory Notes.

FEMALES

The trend estimates of unemployed females fell from 267,700 in December 1999 to 239,700 in September 2000. The trend then rose sharply to 290,300 in October 2001, before generally falling to 226,400 in March 2008. The trend then rose to 289,900 in October 2009 before falling slightly to 289,400 in December 2009.

Series break at April 2001; see paragraph 17 of Explanatory Notes.

PERSONS

The trend estimates of unemployed persons fell from 625,900 in December 1999 to 582,900 in September 2000. The trend then rose to 682,100 in October 2001, before generally falling to 461,100 in March 2008. The trend then rose sharply to 661,600 in July 2009 before falling to 648,200 in December 2009.

Series break at April 2001; see paragraph 17 of Explanatory Notes.

About this Release

Summary results of the monthly Labour Force Survey containing estimates of employed and unemployed persons classified by sex, full-time/part-time status, states and territories and some age groups; and persons not in the labour force.

Explanatory Notes

Explanatory Notes

EXPLANATORY NOTES

INTRODUCTION

1 This publication contains estimates of the civilian labour force derived from the Labour Force Survey component of the Monthly Population Survey. The full time series for estimates from this publication are also available electronically. More detailed estimates are released one week after this publication in various electronic formats - see **Labour Force, Australia, Detailed - Electronic Delivery** (cat. no. 6291.0.55.001) and **Labour Force, Australia, Detailed, Quarterly** (cat. no. 6291.0.55.003).

CONCEPTS, SOURCES AND METHODS

2 The conceptual framework used in Australia's Labour Force Survey aligns closely with the standards and guidelines set out in Resolutions of International Conferences of Labour Statisticians. Descriptions of the underlying concepts and structure of Australia's labour force statistics, and the sources and methods used in compiling the estimates, are presented in **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001) which is available on the ABS website <https://www.abs.gov.au>.

LABOUR FORCE SURVEY

3 The Labour Force Survey is based on a multi-stage area sample of private dwellings (currently approximately 29,000 houses, flats, etc.) and a list sample of non-private dwellings (hotels, motels, etc.), and covers approximately 0.33% of the civilian population of Australia aged 15 years and over.

4 Information is obtained from the occupants of selected dwellings by specially trained interviewers using computer-assisted interviewing (CAI).

5 Households selected for the Labour Force Survey are interviewed each month for eight months, with one-eighth of the sample being replaced each month. The first interview is conducted face-to-face. Subsequent interviews are conducted by telephone (if acceptable to the respondent).

6 The interviews are generally conducted during the two weeks beginning on the Sunday between the 5th and 11th of each month. The information obtained relates to the week before the interview (i.e. the reference week). Each year, to deal with operational difficulties involved with collecting and processing the Labour Force Survey around the Christmas and New Year holiday period, interviews for December start four weeks after November interviews start, and January interviews start five weeks after December interviews start. As a result, January interviewing may commence as early as the 7th or as late as the 13th, depending on the year. Occasionally, circumstances that present significant operational

difficulties for survey collection can result in a change to the normal pattern for the start of interviewing.

7 Estimates from the Labour Force Survey are published first in this publication 32 days after the commencement of interviews for that month, with the exception of estimates for each December which are published 39 days after the commencement of interviews.

SCOPE OF SURVEY

8 The Labour Force Survey includes all persons aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

COVERAGE

9 In the Labour Force Survey, coverage rules are applied which aim to ensure that each person is associated with only one dwelling, and hence has only one chance of selection. The coverage rules are necessarily a balance between theoretical and operational considerations. Nevertheless, the chance of a person being enumerated at two separate dwellings in the survey is considered to be negligible.

POPULATION BENCHMARKS

10 Labour Force Survey estimates are calculated in such a way as to add up to independent estimates of the civilian population aged 15 years and over (population benchmarks). These population benchmarks are projections of the most recently released quarterly Estimated Resident Population (ERP) data. For information on the methodology used to produce the ERP see **Australian Demographic Statistics** (cat. no. 3101.0)**.** To create the population benchmarks for the Labour Force Survey, the most recently released quarterly ERP estimates are projected forward one quarter past the period for which they are required. The projection is based on the historical pattern of each population component - births, deaths, interstate migration and net overseas migration (NOM). By projecting one quarter past that needed for the current population benchmarks, demographic changes are smoothed in, thereby making them less noticeable in the population benchmarks.

11 The ERP series are revised annually in the September quarter issue of **Australian Demographic Statistics** (cat. no. 3101.0), released in March each year, to incorporate more up to date information available for the population components. The revised ERP estimates are used to update the quarterly population projections used in creating the Labour Force Survey population benchmarks. Benchmarks already used in producing Labour Force Survey estimates are not revised. A process of smoothing is used in the creation of subsequent population benchmarks to reduce the effect of these annual revisions to ERP estimates on the Labour Force Survey population benchmarks.

12 In the 2009 ERP revision cycle final NOM data for the 2006-07 reference year was incorporated, detailing a large revision to ERP. To prevent the ERP revision causing an unduly large month to month movement in the labour force benchmark population, a smoothing factor is applied to gradually incorporate the revised estimates. A result of this smoothing method is that the Labour Force civilian population benchmark will not be comparable to the ERP published in **Australian Demographic Statistics** (cat. no. 3101.0),

pending the next labour force revision cycle.

13 Every five years the ERP series are revised to incorporate additional information available from the latest Census of Population and Housing. Following the incorporation of Census information, the ERP series prior to the latest Census are final and subject to no further revision. Labour Force Survey population benchmarks, and the estimates, are revised following this 5-yearly revision in the ERP. From the February 2009 issue of this publication, labour force estimates have been compiled using population benchmarks based on the results of the 2006 Census of Population and Housing. Revisions were made in the February 2009 issue to historical labour force estimates from June 2001 to January 2009.

ESTIMATION METHOD

14 The estimation method used in the Labour Force Survey is Composite Estimation, which was introduced in May 2007. Composite Estimation combines data collected in the previous six months with current month's data to produce the current month's estimates, thereby exploiting the high correlation between overlapping samples across months in the Labour Force Survey. The Composite Estimator combines the previous and current months' data by applying different factors according to length of time in the survey. After these factors are applied, the seven months of data are weighted to align with current month population benchmarks. For details see **Information Paper: Forthcoming Changes to Labour Force Statistics, 2007** (cat. no. 6292.0).

COMPARABILITY OF SERIES

15 From April 1986, the definition of employed persons was changed to include persons who worked without pay between 1 and 14 hours per week in a family business or on a farm (i.e. contributing family workers). For further information, see paragraphs 22 and 23 of the Explanatory Notes in the February 2003 issue of **Labour Force, Australia** (cat. no. 6203.0).

16 The ABS introduced telephone interviewing into the Labour Force Survey in August 1996. Implementation was phased in for each new sample group from August 1996 to February 1997. During the period of implementation, the new method produced different estimates than would have been obtained under the old methodology. The effect dissipated over the final months of implementation and was no longer discernible from February 1997. The estimates for February 1997 and onwards are directly comparable to estimates for periods prior to August 1996. For further details, see the feature article in the June 1997 issue of **Labour Force, Australia** (cat. no. 6203.0).

17 From April 2001 the Labour Force Survey has been conducted using a redesigned questionnaire containing additional data items and some minor definitional changes. The definition of unemployed persons was changed to include all persons who were waiting to start work and were available to start in the reference week. This change was introduced in February 2004, when historical unit record data were revised from April 2001 to January 2004. This revision created a small trend break at April 2001 in unemployed persons and unemployment rate series. For further details, see **Information Paper: Forthcoming Changes to Labour Force Statistics** (cat. no. 6292.0), released in December 2003.

18 Core labour force series were revised in April 2001 for the period April 1986 to March 2001 for the remaining definitional changes introduced with the redesigned questionnaire, to reduce the impact of the changes on labour force series. For further details, see **Information Paper: Implementing the Redesigned Labour Force Survey Questionnaire** (cat. no. 6295.0) and **Information Paper: Questionnaires Used in the Labour Force**

Survey (cat. no. 6232.0).

19 In May 2007, an improved method of estimation, known as composite estimation, was introduced into the Labour Force Survey. In introducing this change the ABS revised unit record data from April 2001 to April 2007 based on the new estimation method. While estimates for periods prior to April 2001 are unrevised and were compiled using a different estimation method, no trend break was identified in the employed persons series. Also, no change was identified in the trend breaks in the unemployed persons and unemployment rate series which arose with the introduction of a redesigned survey form in April 2001 (as noted above in paragraph 16). For further details, see **Information Paper: Forthcoming Changes to Labour Force Statistics, 2007** (cat. no. 6292.0).

LABOUR FORCE SURVEY SAMPLE

20 The current Labour Force Survey sample has been selected using information collected in the 2006 Census of Population and Housing.

21 The majority of this sample was phased in over the period November 2007 to June 2008, with one-eighth of this portion of the sample being introduced every month. The remainder of the sample (about 20% of the total), which covers less settled areas of Australia and non-private dwellings was rotated in full for New South Wales, Western Australia, Northern Territory and Australian Capital Territory in March 2008, and for Victoria, Queensland, South Australia and Tasmania in April 2008. Such a pattern of implementation means that any changes to labour force estimates due to differences between the two samples, or any other influences, were spread over the eight months.

22 As one of a range of ABS savings initiatives for the 2008-09 financial year, there was a 24% reduction in the LFS sample size for the period July 2008 to August 2009, relative to the June 2008 sample size. The sample reduction was reinstated from September 2009 to December 2009, with December 2009 estimates being the first produced under the fully reinstated sample.

23 For further details, see **Information Paper: Labour Force Survey Sample Design** (cat. no. 6269.0).

RELIABILITY OF ESTIMATES

24 Two types of error are possible in an estimate based on a sample survey: sampling error and non-sampling error.

25 Sampling error occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all dwellings in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors. Standard errors of key estimates for the latest month and of movements since the previous month of these estimates are shown in the standard errors section of this publication. Standard errors for other estimates and other movements may be calculated by using the spreadsheet contained in **Labour Force Survey Standard Errors, Data Cube** (cat. no. 6298.0.55.001) which is available free of charge on the ABS website <https://www.abs.gov.au>.

26 Non-sampling error arises from inaccuracies in collecting, recording and processing the

data. Every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures. Non-sampling error also arises because information cannot be obtained from all persons selected in the survey. The Labour Force Survey receives a high level of co-operation from individuals in selected dwellings, with the average response rate over the last year being 97%. See Glossary for definition of response rate.

SEASONAL ADJUSTMENT AND TREND ESTIMATION

27 Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences on the series can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular month. This means that month-to-month movements of the seasonally adjusted estimates may not be reliable indicators of trend behaviour.

28 The Labour Force Survey uses the concurrent seasonal adjustment method to derive seasonal factors. Concurrent seasonal adjustment uses data up to the current month to estimate seasonal factors for the current and all previous months. This process can result in revisions each month to estimates for earlier periods. However, in most instances, the only noticeable revisions will be to the seasonally adjusted estimates for the previous month and one year prior to the current month.

29 The revision properties of the seasonally adjusted and trend estimates can be improved by the use of Autoregressive Integrated Moving Average (ARIMA) modelling. ARIMA modelling relies on the characteristics of the series being analysed to project future period data. The projected values are temporary, intermediate values, that are only used internally to improve the estimation of the seasonal factors. The projected data do not affect the original estimates and are discarded at the end of the seasonal adjustment process. The Labour Force Survey uses an ARIMA model for 95% of the individual time series. The ARIMA model is assessed as part of the annual reanalysis. For further details, see the feature article in **Australian Economic Indicators, Oct 2004** (cat. no. 1350.0).

30 Seasonal adjustment is able to remove the effect of events which occur at the same time in the survey every year. However, there are some events, like holidays, which are not always at the same time in the survey cycle or which are not at the same time across Australia. The effects of these types of events on Labour Force Survey estimates cannot in all cases be removed, because the pattern of their effects cannot be determined. However, two events which are adjusted for in the seasonally adjusted series are the January interview start date and the timing of Easter. For further details, see **Information Paper: Forthcoming Changes to Labour Force Statistics** (cat. no. 6292.0) released in December 2003.

31 While seasonal factors for the complete time series are estimated each month, they will continue to be reviewed annually at a more detailed level to take into account each additional year's original data. This annual review will not normally result in significant changes to published estimates. The review is usually conducted in February each year with the results released in the February issue of this publication.

32 The smoothing of seasonally adjusted series to produce 'trend' series reduces the impact of the irregular component of the seasonally adjusted series. These trend estimates are derived by applying a 13-term Henderson-weighted moving average to all months except the last six. The last six monthly trend estimates are obtained by applying surrogates of the Henderson average to the seasonally adjusted series. Trend estimates are used to analyse

the underlying behaviour of a series over time.

33 While this smoothing technique enables estimates to be produced for the latest month, it does result in revisions in addition to those caused by the revision of seasonally adjusted estimates. Generally, revisions due to the use of surrogates of the Henderson average become smaller, and after three months have a negligible impact on the series.

34 Trend estimates are published for the Northern Territory in table 10 and for the Australian Capital Territory in table 11. Unadjusted series for the two territories have shown, historically, a high degree of variability, which can lead to considerable revisions to the seasonally adjusted estimates each month when seasonal factors are estimated. For this reason, seasonally adjusted estimates are not currently published for the two Territories. In addition, caution should be exercised in the interpretation of trend estimates for the two territories, particularly for the three most recent months, where revisions may be relatively large.

35 For further information, see **A Guide to Interpreting Time Series - Monitoring Trends** (cat. no. 1349.0) or contact the Assistant Director, Time Series Analysis on (02) 6252 6345 or email time.series.analysis@abs.gov.au.

RELATED PUBLICATIONS

36 Users may also wish to refer to **Australian Labour Market Statistics** (cat. no. 6105.0). This publication contains additional tables and a detailed list of related publications. For further information about this publication, please contact the Assistant Director, Labour Market Statistics on (02) 6252 7636.

37 ABS Information about the labour market can be found on the Labour theme page on the ABS website <https://www.abs.gov.au>(Themes).

38 Information about current publications and other products released by the ABS is available from the statistics page on the ABS website. The ABS also issues a daily release advice on the website, Upcoming Product Releases which details products to be released in the week ahead.

DATA AVAILABLE ON REQUEST

39 As well as the statistics included in this and related publications, the ABS may have other relevant data available. Inquiries should be made to the Labour Force contact officer on (02) 6252 6525, email labourforce@abs.gov.au or to any ABS office.

EFFECTS OF ROUNDING

40 Estimates have been rounded and discrepancies may occur between sums of the component items and totals. Estimates of movement shown in this publication are obtained by taking the difference of unrounded estimates. The movement estimate is then rounded to one decimal place. Where a discrepancy occurs between the reported movement and the difference of the rounded estimates, the reported movement will be more accurate.

SYMBOLS AND ABBREVIATIONS

41 SYMBOLS AND ABBREVIATIONS

Symbol	Definition
'000	thousands
%	percentage
ABS	Australian Bureau of Statistics
CAI	computer assisted interviewing
cat. no.	catalogue number
ERP	estimated resident population
f/t	full time
LFS	Labour Force Survey
p/t	part time
pts	percentage points
Seas adj.	seasonally adjusted
TAFE	Technical and Further Education

Glossary

GLOSSARY

Actively looking for work

Includes writing, telephoning or applying in person to an employer for work; answering an advertisement for a job; checking factory noticeboards or the touchscreens at the Centrelink offices; being registered with Centrelink as a jobseeker; checking or registering with any other employment agency; advertising or tendering for work; and contacting friends or relatives.

Aggregate monthly hours worked

Aggregate monthly hours worked measures the total number of actual hours worked by employed persons in a calendar month. It differs from the actual hours worked estimates (and the usual hours worked estimates) since these refer only to the hours worked in the reference week.

Actual and usual hours worked cannot be aggregated across time to produce either quarterly or annual estimates as they relate to only a single week in the month. In contrast, aggregate monthly hours worked estimates are a true monthly measure, and may be aggregated across time to produce both quarterly and annual estimates.

Attending full time education

Persons aged 15-24 years enrolled at secondary or high school or enrolled as a full time student at a Technical and Further Education (TAFE) college, university, or other educational institution in the reference week.

Attending school

Persons aged 15-19 years enrolled at secondary or high school in the reference week.

Attending tertiary educational institution full time

Persons aged 15-24 years enrolled full time at a TAFE college, university, or other educational institution in the reference week, except those persons aged 15-19 years who were still attending school.

Civilian population aged 15 years and over

All usual residents of Australia aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

Composite Estimation

The estimation methodology used in the Labour Force Survey. Composite Estimation uses sample responses from nearby months as well as from the reference month to derive estimates for the reference month. This approach achieves gains in efficiency by exploiting the high similarity between the responses provided by the same respondent in previous months. For details see **Information Paper: Forthcoming Changes to Labour Force Statistics, 2007** (cat. no. 6292.0).

Employed

All persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
    - away from work for less than four weeks up to the end of the reference week; or
    - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
    - away from work as a standard work or shift arrangement; or
    - on strike or locked out; or
    - on workers' compensation and expected to return to their job; or
- were employers or own account workers, who had a job, business or farm, but were not at work.

Employment to population ratio

For any group, the number of employed persons expressed as a percentage of the civilian population in the same group.

Full time workers

Employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Gross flows

The matching of respondents who report in consecutive months enables analysis of the transition of individuals between the different labour force status classifications, referred to as the **matched sample**. The transition counts between the different labour force status classifications from one point in time to the next are commonly referred to as **gross flows**.

The figures presented in gross flows are presented in original terms only and do not align with published labour force estimates. The gross flows figures are derived from the matched sample between consecutive months, which after taking account of the sample rotation and varying non-response in each month is approximately 80 percent of the sample.

Caution should be exercised when analysing these gross flows data due to:

- the figures presented sum to approximately 80 percent of the population values as the gross flows data are based on the matched sample only;
- there is no adjustment applied to account for changes due to seasonal patterns (referred to commonly as seasonal adjustment); and
- the relative sizes of each transition class are subject to bias due to the matched sample being a non-representative sample.

Labour force

For any group, persons who were employed or unemployed, as defined.

Labour force status

A classification of the civilian population aged 15 years and over into employed, unemployed or not in the labour force, as defined. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.

Labour force underutilisation rate

The sum of the number of persons unemployed and the number of persons in underemployment, expressed as a proportion of the labour force.

Not in labour force

Persons who were not in the categories employed or unemployed as defined.

Participation rate

For any group, the labour force expressed as a percentage of the civilian population aged 15 years and over in the same group.

Part time workers

Employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Response rate

The number of fully responding dwellings expressed as a percentage of the total number of dwellings excluding sample loss. Examples of sample loss include: dwellings where all persons are out of scope and/or coverage; vacant dwellings; dwellings under construction;

dwellings converted to non-dwellings; derelict dwellings; and demolished dwellings.

Seasonally adjusted series

A time series of estimates with the estimated effects of normal seasonal variation removed. See Explanatory Notes 27 to 31 for more detail.

Trend series

A smoothed seasonally adjusted series of estimates. See Explanatory Notes 32 to 35 for more detail.

Underemployment rate

The number of underemployed workers expressed as a percentage of the labour force.

Underemployed workers

Employed persons aged 15 years and over who want, and are available for, more hours of work than they currently have. They comprise:

- persons employed part time who want to work more hours and are available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey; or
- persons employed full time who worked part time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people wanted to work full time in the reference week and would have been available to do so.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full time or part time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Unemployed looking for full time work

Unemployed persons who:

- actively looked for full time work; or
- were waiting to start a new full time job.

Unemployed looking for part time work

Unemployed persons who:

- actively looked for part time work only; or
- were waiting to start a new part time job.

Unemployment rate

For any group, the number of unemployed persons expressed as a percentage of the labour force in the same group.

Unemployment to population ratio

For any group, the number of unemployed persons expressed as a percentage of the civilian population in the same group.

Quality Declaration - Summary

QUALITY DECLARATION - SUMMARY

INSTITUTIONAL ENVIRONMENT

Labour Force statistics are compiled from the Labour Force Survey which is conducted each month throughout Australia as part of the Australian Bureau of Statistics (ABS) household survey program. For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment.

RELEVANCE

The Labour Force Survey provides monthly information about the labour market activity of Australia's resident civilian population aged 15 years and over. The Labour Force Survey is designed to primarily provide estimates of employment and unemployment for the whole of Australia and, secondarily, for each state and territory.

TIMELINESS

The Labour Force Survey enumeration begins on the Sunday between the 5th and 11th of the month, except for the Christmas and New Year holiday period. In December enumerations starts between the 3rd and 9th (4 weeks after November enumeration begins). In January enumeration starts between the 7th and 13th (5 weeks after December enumeration begins).

Key estimates from the Labour Force Survey are published in two stages. The first, *Labour Force, Australia* (cat. no. 6202.0), is released 32 days after the commencement of enumeration for the month, with the exception of estimates for December which are published 39 days after the commencement of enumeration.

The second stage includes detailed data that were not part of the first stage and are published in *Labour Force, Australia, Detailed - Electronic Delivery* (cat. no. 6291.0.55.001) and *Labour Force, Australia, Detailed, Quarterly* (cat. no. 6291.0.55.003). The second stage is released 7 days after the first stage.

ACCURACY

The Labour Force Survey is based on a sample of private dwellings (approximately 29,000 houses, flats etc) and non-private dwellings, such as hotels and motels. The sample covers about 0.33% of the Australian civilian population aged 15 years or over. The Labour Force Survey is designed primarily to provide estimates of key labour force statistics for the whole of Australia and, secondarily, for each state and territory.

Two types of error are possible in an estimate based on a sample survey: non-sampling error and sampling error.

Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures. Non-sampling error also arises because information cannot be obtained from all persons selected in the survey. The Labour Force Survey receives a high level of cooperation, with an average response rate for the last year being 97%.

Sampling error occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all dwellings in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors.

Standard errors of key estimates and movements since the previous month are available in *Labour Force, Australia* (cat. no. 6202.0). The standard error of other estimates and movements may be calculated by using the spreadsheet contained in *Labour Force Survey Standard Errors, Data Cube* (cat. no. 6298.0.55.001).

COHERENCE

The ABS has been conducting the Labour Force Survey each month since February 1978. While seeking to provide a high degree of consistency and comparability over time by minimising changes to the survey, sound survey practice requires careful and continuing maintenance and development to maintain the integrity of the data and the efficiency of the collection.

The changes which have been made to the Labour Force Survey have included changes in sampling methods, estimation methods, concepts, data item definitions, classifications, and time series analysis techniques. In introducing these changes the ABS has generally revised previous estimates to ensure consistency and coherence with current estimates. For a full list of changes made to the Labour Force Survey see Chapter 20 in *Labour Statistics: Concepts, Sources and Methods* (cat. no. 6102.0.55.001).

INTERPRETABILITY

The key estimates from the Labour Force Survey are available as original, seasonally adjusted and trend series. Seasonal adjustment is a means of removing the effects of normal seasonal variation from the series so other influences on the series can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular influences which may be present and therefore month-to-month movements may not be reliable

indicators of underlying behaviour. To assist in interpreting the underlying behaviour, the ABS produces the trend series by smoothing the seasonally adjusted series to reduce the impact of the irregular component. For further information, see *A Guide to Interpreting Time Series - Monitoring Trends* (cat. no. 1349.0).

Further information on the terminology and other technical aspects associated with statistics from the Labour Force Survey can be found in the publication *Labour Force, Australia* (cat. no. 6202.0), which contains detailed Explanatory Notes, Standard Error information and a Glossary.

ACCESSIBILITY

Please see the Related Information tab for the list of products that are available from this collection.

What If

WHAT IF...? REVISIONS TO TREND ESTIMATES

EFFECT OF NEW SEASONALLY ADJUSTED ESTIMATES ON TREND ESTIMATES

TREND REVISIONS

Each time new seasonally adjusted estimates become available, trend estimates are revised. This revision is a combined result of the concurrent seasonal adjustment process and the application of surrogates of the Henderson average to the seasonally adjusted series (see paragraphs 27 to 35 of the Explanatory Notes).

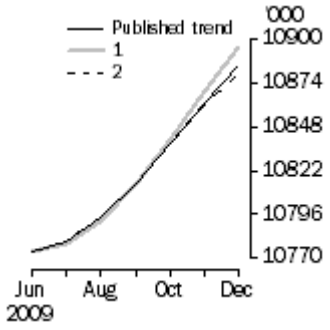
The examples in the tables below show two illustrative scenarios and the consequent revisions to previous trend estimates of employment and the unemployment rate. The revisions in the scenarios are due to the use of surrogates of the Henderson average, as the impact of revision of seasonally adjusted estimates can not be estimated in advance.

1 The January seasonally adjusted estimate is **higher** than the December estimate by:
0.24% for employment
2.10% for the unemployment rate

2 The January seasonally adjusted estimate is **lower** than the December estimate by:
0.24% for employment
2.10% for the unemployment rate

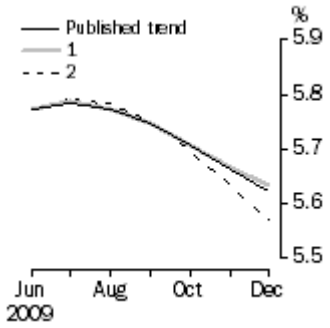
The percentage changes of 0.24% and 2.10% represent the average absolute monthly percentage changes in employment and the unemployment rate respectively. Estimates in the graphs have been calculated using unrounded estimates, and may be different from, but more accurate than, rounded estimates depicted in its corresponding table.

Employment



	Trend as published	WHAT IF NEXT MONTH'S SEASONALLY ADJUSTED ESTIMATE IS: (1) 10 917.5 i.e. rises by 0.24%	(2) 10 895.4 i.e. falls by 0.24%
2009			
September	10 814.8	10 813.8	10 814.7
October	10 838.3	10 840.7	10 838.3
November	10 862.0	10 868.8	10 861.1
December	10 884.3	10 895.5	10 880.8

Unemployment Rate



	Trend as published	WHAT IF NEXT MONTH'S SEASONALLY ADJUSTED ESTIMATE IS: (1) 5.6 i.e. rises by 2.10%	(2) 5.5 i.e. falls by 2.10%
2009			
September	5.7	5.7	5.7
October	5.7	5.7	5.7
November	5.7	5.7	5.6
December	5.6	5.6	5.6

Standard Errors

STANDARD ERRORS

STANDARD ERRORS

The estimates in this publication are based on information gained from the occupants of a sample survey of dwellings. Because the entire population is not surveyed, the published estimates are subject to sampling error. The most common way of quantifying such sampling error is to calculate the standard error for the published estimate or statistic. For more information, see paragraphs 24 to 26 of the Explanatory Notes.

LEVEL ESTIMATES

To illustrate, let us say the published level estimate for employed persons aged 15-19 years is 700,000 and the associated standard error is 8,300. The standard error is then used to interpret the level estimate of 700,000. For instance, the standard error of 8,300 indicates that:

- There are approximately two chances in three that the real value falls within the range 691,700 to 708,300 (700,000 + or - 8,300)

- There are approximately nineteen chances in twenty that the real value falls within the range 683,400 to 716,600 (700,000 + or - 16,600).

The real value in this case is the result we would obtain if we could enumerate the total population.

The following table shows the standard errors for this month's level estimates.

		NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	AUSTRALIA Males	Females	Persons
Aged 15 years and over												
Employed												
Full time	'000	20.4	20.6	15.2	6.7	9.7	2.7	4.0	2.4	26.7	19.1	32.3
Part time	'000	14.2	13.0	10.0	4.9	6.9	2.0	1.3	1.5	11.0	17.2	21.2
Total	'000	22.4	25.1	17.4	7.8	10.7	3.2	4.7	2.5	29.0	26.7	36.7
Unemployed												
Looking for f/t work	'000	8.8	6.6	6.3	2.7	3.4	1.1	0.5	0.9	10.0	8.0	12.9
Looking for p/t work	'000	5.2	4.6	3.3	1.7	2.2	0.6	0.3	0.5	4.9	6.2	7.9
Total	'000	10.3	8.2	7.0	3.1	4.1	1.3	0.7	1.0	11.2	10.1	15.3
Labour force	'000	22.8	25.8	17.7	7.9	10.9	3.2	4.8	2.5	29.8	27.4	37.3
Not in labour force	'000	21.0	22.9	15.1	7.0	10.3	3.1	3.3	2.2	24.0	28.7	33.9
Unemployment rate												
Looking for f/t work	pts	0.3	0.3	0.4	0.5	0.4	0.7	0.5	0.5	0.2	0.3	0.2
Looking for p/t work	pts	0.5	0.5	0.5	0.6	0.6	0.8	1.2	1.0	0.5	0.3	0.2
Total	pts	0.3	0.3	0.3	0.4	0.3	0.5	0.5	0.5	0.2	0.2	0.1
Participation rate	pts	0.4	0.6	0.5	0.6	0.6	0.8	2.9	0.9	0.3	0.3	0.2
Aged 15-19 years												
Employed												
Full time	'000	3.6	2.7	2.8	1.1	1.9	0.5	0.4	0.4	4.7	3.9	5.7
Part time	'000	4.6	4.3	3.8	1.7	2.2	0.7	0.4	0.6	5.4	6.2	7.9
Total	'000	5.7	5.0	4.7	2.0	2.9	0.8	0.5	0.7	6.8	7.0	9.5
Unemployed												
Looking for f/t work	'000	3.5	2.1	2.7	1.1	1.5	0.5	0.3	0.3	4.1	3.2	5.2
Looking for p/t work	'000	3.7	3.1	2.0	1.3	1.4	0.4	0.2	0.4	3.9	3.9	5.5
Total	'000	5.2	3.8	3.5	1.8	2.0	0.7	0.3	0.5	5.6	5.0	7.6
Labour force	'000	6.5	5.5	5.2	2.2	3.2	0.9	0.6	0.8	7.5	7.5	10.5
Not in labour force	'000	7.7	6.1	4.8	2.3	3.3	1.0	0.7	0.8	8.0	7.5	11.1
Unemployment rate												
Looking for f/t work	pts	3.3	3.7	3.1	5.1	3.4	6.2	5.2	7.1	2.0	2.5	1.6
Looking for p/t work	pts	2.1	1.9	1.5	2.7	2.3	3.3	4.6	3.8	1.4	1.1	0.9
Total	pts	1.8	1.7	1.6	2.5	1.9	3.2	3.4	3.4	1.2	1.1	0.8
Participation rate	pts	1.4	1.5	1.7	2.1	2.1	2.7	3.8	3.3	1.0	1.0	0.7
Unemployment to population ratio - looking for f/t work	pts	0.7	0.6	0.9	1.0	0.9	1.6	1.6	1.3	0.5	0.4	0.3

MOVEMENT ESTIMATES

The following example illustrates how to use the standard error to interpret a movement estimate. Let us say that one month the published level estimate for females employed part-time in Australia is 1,890,000; the next month the published level estimate is 1,900,000 and the associated standard error for the movement estimate is 9,500. The standard error is then used to interpret the published movement estimate of 10,000. For instance, the standard error of 9,500 indicates that:

- There are approximately two chances in three that the real movement between the two months falls within the range 500 to 19,500 (10,000 + or - 9,500)

- There are approximately nineteen chances in twenty that the real movement falls within the range -9,000 to 29,000 (10,000 + or - 19,000).

The following table shows the standard errors for this month's movement estimates.

		NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	AUSTRALIA Males	Females	Persons
Aged 15 years and over												
Employed												
Full time	'000	13.5	10.9	9.7	3.8	6.1	1.7	1.3	1.6	17.1	12.5	21.7
Part time	'000	8.7	7.3	6.0	2.7	4.0	1.2	0.6	1.0	7.8	11.5	13.8
Total	'000	16.2	13.3	13.0	5.3	7.7	2.1	1.4	1.9	18.9	17.2	26.5
Unemployed												
Looking for f/t work	'000	8.7	6.4	6.8	2.6	3.6	1.1	0.5	0.9	10.1	8.0	13.1
Looking for p/t work	'000	5.1	4.5	3.4	1.6	2.3	0.7	0.3	0.6	5.0	6.2	8.0
Total	'000	10.2	7.9	7.8	3.0	4.1	1.3	0.5	1.1	11.3	10.2	15.5
Labour force	'000	16.7	13.6	13.7	5.6	8.0	2.2	1.4	1.9	19.5	17.7	27.4
Not in labour force	'000	15.4	12.5	11.7	5.0	7.0	2.1	1.1	1.8	15.0	18.6	24.7
Unemployment rate												
Looking for f/t work	pts	0.4	0.3	0.4	0.5	0.4	0.7	0.5	0.6	0.2	0.3	0.2
Looking for p/t work	pts	0.5	0.5	0.5	0.6	0.6	0.9	1.2	1.1	0.5	0.3	0.2
Total	pts	0.3	0.3	0.3	0.4	0.3	0.6	0.5	0.5	0.2	0.2	0.1
Participation rate	pts	0.3	0.3	0.4	0.4	0.4	0.5	0.9	0.7	0.2	0.2	0.2
Aged 15-19 years												
Employed												
Full time	'000	2.8	2.0	2.2	0.8	1.5	0.4	0.3	0.3	3.6	3.0	4.3
Part time	'000	3.6	3.2	2.9	1.3	1.8	0.5	0.3	0.5	4.1	4.7	5.8
Total	'000	4.3	3.5	3.4	1.4	2.2	0.6	0.4	0.6	5.1	5.2	6.8
Unemployed												
Looking for f/t work	'000	3.5	2.1	2.8	1.0	1.5	0.5	0.2	0.3	4.2	3.3	5.3
Looking for p/t work	'000	3.7	3.1	2.1	1.3	1.5	0.4	0.2	0.4	3.9	4.0	5.6
Total	'000	5.2	3.8	3.6	1.7	2.1	0.7	0.3	0.5	5.7	5.1	7.7
Labour force	'000	4.7	3.8	3.7	1.6	2.3	0.7	0.4	0.6	5.5	5.5	7.5
Not in labour force	'000	5.1	4.2	3.6	1.6	2.3	0.7	0.5	0.6	6.0	5.7	7.9
Unemployment rate												
Looking for f/t work	pts	3.7	4.4	3.6	6.0	3.6	6.5	6.4	8.2	2.3	2.8	1.8
Looking for p/t work	pts	2.1	1.9	1.7	2.7	2.3	4.0	4.3	4.0	1.5	1.2	0.9
Total	pts	1.9	1.8	1.8	2.6	2.0	3.5	3.7	3.6	1.3	1.1	0.9
Participation rate	pts	1.0	1.1	1.2	1.4	1.5	1.9	2.5	2.5	0.7	0.8	0.5
Unemployment to population ratio - looking for f/t work	pts	0.7	0.6	0.9	1.0	1.0	1.5	1.2	1.3	0.5	0.4	0.4